

## Did the American Medical Association make the correct decision classifying obesity as a disease?

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### EDITORIAL

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The American Medical Association (AMA) recently classified obesity a disease, defining obesity as having a Body Mass Index (BMI) measure above 30.<sup>1</sup> This decision went against the advice of its own Public Health and Science Committee, and has sparked widespread discontent and discussion amongst medical and healthcare communities. The fact that this classification has been made has potential ramifications for health care around the world, and many factors need to be considered in deciding whether the decision to make obesity a disease is in fact appropriate.

#### Are we classifying obesity correctly?

Before considering whether obesity should be considered a disease, we must question the suitability of BMI as a rubric. The assumption is that the ratio between height and weight provides an index of body fatness. However, there is an imperfect association between BMI and body fatness,<sup>2</sup> and BMI does not and cannot distinguish adipose type and distribution. While total body fat is important, studies have shown that central adiposity (e.g., visceral fat) poses a higher risk for developing disorders associated with obesity than overall body fatness.<sup>3</sup> There are superior anthropometric indices of central adiposity, including waist-to-hip ratio, yet BMI continues to be the criterion owing to previous widespread and historical use despite its obvious

shortcomings. Using the BMI tool, incorrect clinical categorisation of “overweight” or “obese” is common. Therefore, this editorial accepts that the AMA has selected an imperfect tool for classifying obesity, and will hereafter focus on the theoretical notion of obesity.

#### For obesity as a disease

The Webster dictionary defines disease as “an impairment of the normal state... that interrupts or modifies the performance of the vital functions, and is a response to environmental factors”.<sup>4</sup> The genome of our Palaeolithic ancestors (50,000–10,000 BC) adapted to be “thrifty”, to convert calories into adipose tissue during periods of nutritional abundance and prevent elimination during periods of famine.<sup>5</sup> The overall genetic makeup of Homo sapiens has changed since the Palaeolithic era (though this is still debated), yet famine is rare within contemporary Western societies and there is often a surplus of food availability. We are also leading progressively sedentary lifestyles, resulting in a progressive calorific surplus. Our genome is therefore seemingly maladapted to modern Western environments.

While a person may have a genetic predisposition to obesity, the rapidly changing epidemiology of obesity points to the importance of environmental determinants. Further, not only is the incidence of obesity accelerating, obesity is increasingly appearing among younger age groups.<sup>6</sup> Obesity is now seen in over 42 million children worldwide, increasing the risk of premature onset of subsequent illnesses, including cardiovascular diseases, metabolic disorders, musculoskeletal conditions, and some cancers.<sup>7</sup> According to one seminal study, the prevalence of obesity and subsequent cardiovascular diseases has become so pervasive that for the first time, the current generation of children in the United States (US) are not expected to live as long as their parents.<sup>8</sup> Moreover, obesity not only leads to a decreased lifespan, but also to a decreased quality of life.<sup>9</sup>

Within modern Western societies, where physicality for survival has diminished, the economic costs to society

have grown.<sup>10</sup> Limiting these economic costs to (lost) productivity, in the US alone it has been estimated that total productivity costs are as high as US \$66 billion annually.<sup>10</sup> Further, the earlier acquisition of obesity and associated co-morbid non-communicable diseases is resulting in a prolonged and enhanced burden of disease, and this is a particular threat to the economic development of low- and middle-income countries least prepared to manage chronic medical conditions.<sup>10</sup> Lastly, these costs are purely economic and do not reflect the social costs on individuals and communities.

### Against obesity as a disease

Does it really matter whether or not we classify obesity as a disease? Can obesity really be considered a maladaptation to modern Western environments? Yes, our overall genetic makeup has apparently changed little over the millennia, and yes, survival of the fittest for our ancestors was the hallmark of the physically fittest. However, today's culture does not determine survival based on physical prowess. Successful survival in 21st century Western culture depends heavily on technology and intellectual prowess. So, should we wait for our genes to catch up to modern environments? Or, should we do our best to adapt to current environments and focus on fostering the tools necessary to ensure optimal development of intellectual prowess?

Let us assume labels do matter. Undeniably, obesity is a risk factor associated with a clustering of complications, including hypertension, hypercholesterolemia, and type 2 diabetes, each of which independently and additively increase cardiovascular disease risk.<sup>11</sup> However, obesity is exactly that—a risk factor. Being obese does not necessarily equate to poor health, despite the hormonal alterations that are associated with high body fat. Strong evidence has emerged suggesting that an adult may be “fat but fit”, and that being fat and fit is actually better than being lean and unfit.<sup>12</sup> Moreover, cross-sectional studies pronouncing positive associations between being overweight and mortality often fail to control for factors such as lifestyle behaviours, socio-economic status, or family history—all of which are important compounding variables.<sup>13</sup> If we do accept this risk factor as a disease, should we also consider cigarette smoking a disease?

Arguably of utmost importance, labelling obesity as a disease may foster a culture of personal irresponsibility, whereby individuals are absolved from practising healthy lifestyle behaviours. Lifestyle choices are cognitive decisions, a process that is potentially guided by a moral framework. Classifying obesity as a disease de-emphasises the role of cognitive decision making in guiding an individual's health behaviour. This shift away from personal responsibility may encourage a

“hands-off” approach to health behaviour. Also of consideration is the notion of who benefits most from personal irresponsibility, especially when industry—in the form of pharmaceutical companies—stand to make billions of dollars from this potential shift in the medical landscape.

### Conclusion

Obesity has reached pandemic proportions, is strongly associated with myriad co-morbid complications, and is leading to a progressive economic and social burden. However, being obese does not necessarily equate to poor health, and evidence suggests individuals may be fat but fit. Perhaps most importantly, labelling obesity a disease may absolve personal responsibility and encourage a hands-off approach to health behaviour. This knowledge raises the question of morality, as individuals must now choose whether they will invest effort into maintaining a healthy lifestyle in order to free society of the healthcare burden associated with obesity. Given the myriad issues surrounding the decision to classify obesity in this way, perhaps a new question should be posed in order for society to continue this discussion: who benefits most from labelling obesity a disease?

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## PEER REVIEW

Externally peer reviewed.

## CONFLICTS OF INTEREST

JC is deputy editor of the AMJ.